

### **AMENDMENTS TO THE SPECIFICATION**

Please replace paragraph [0027] with the following amended paragraph:

[0027] Still referring to Fig. 2[,] ~~and~~ Fig. 3~~and~~ Fig. 4, the tunnel junction 122 further includes an n-doped layer 220 of InP, AlInAs, or of a lower bandgap material such as InGaAs, AlInGaAs or InGaAsP. The n-doped layer 220 should also be heavily doped (greater than about  $2 \times 10^{18} \text{ cm}^{-3}$ ) and very thin (less than about 100 nanometers). For a good lattice matching, the VCSEL 100 uses an InP n-type layer in the tunnel junction 122.